User’s Manual

EZPPC-70B-5B-C1G
EZPPC-70B-5B-C15G
EZPOS-70B-5B-C1G
EZPOS-70B-5B-C15G

Copyrights

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Liability Disclaimer

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Regulatory Information

FCC Notices

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio or television technician for help.

This device complies with Part 15 (B) of the FCC Rules. Operation is subject to the following two conditions:

1) this device may not cause harmful interference and

2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS DEVICE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE DEVICE.

CE Notice

This device complies with **EMC Directive 2004/108/EC** issued by the Commission of the European Community.

WEEE Notice

The **WEEE** mark applies only to countries within the European Union (EU) and Norway.
This appliance is labeled in accordance with **European Directive 2002/96/EC** concerning **waste electrical and electronic equipment** (**WEEE**). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

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1.

Introduction

Comes with a large 15” TFT 5-Wire Resistive type LCD touchscreen panel, EZPPC 70 (EZPOS 70) features Intel Celeron M 1/1.5 GHZ CPU with 1GB (maximum) SO-DIMM DDR RAM delivering high performance to meet most of requirements from current and future applications. For the thermal issue arising from such hot performance, EZPPC 70 (EZPOS 70) adopts advanced “Fanless” thermal solution which not only keeps the working temperature under the normal value efficiently but also eliminates maintenance cost, voltage consumption and possible failure of CPU cooler.

Ultra-slim design combined with maximum strength and durability of ultra slim die-cast aluminum alloy chassis help EZPPC 70 (EZPOS 70) set a new industry PC standard. Thanks to high rigidity die-casting aluminum alloy chassis, EZPPC 70 (EZPOS 70) can defend and resist corrosion and impact damage from any high loaded crucial industry and public service environment. Ultra slim chassis (390mm X 342mm X 58 mm) of EZPPC 70 (EZPOS 70) offers most flexible installation options. With multiple optional installation accessories (for more information, please contact our business representative), EZPPC 70 (EZPOS 70) can be installed in everywhere and meet every installation requirement from every application.

Originated and introduced advanced and precision battery technology from notebook, EZPPC 70 (EZPOS 70) is equipped with onboard “smart battery” which is unparalleled in IPC and POS industry. Beyond traditional and dull “battery backup”, EZPPC 70 (EZPOS 70) detects and “communicates” with the onboard smart battery, and allows user to monitor and manage battery allocation depends on variable operation environments as the power management on notebook. The onboard smart battery can supply voltage to EZPPC 70 (EZPOS 70) more than one hour without any external power supply and regulate the power supplied from wall outlet, and to extend the life time of EZPPC 70 (EZPOS 70) to the maximum and reduce electronic failures to the minimum.

Combined and equipped with all industry-standard I/O port, EZPPC 70 (EZPOS 70) is an all-in-one touch POS terminal with unlimited flexible compatibility and extensibility to integrate with other accessories and devices. With one cash

drawer port, Gigabit Ethernet port, 4 USB 2.0 ports, one RS-232/422/485 port and 3 RS-232 ports equipped, EZPPC 70 (EZPOS 70) can be expanded and connected with all expanded devices required - Wireless LAN, VFD, MSR and iButton…etc, to help user to conquer challenges from variable business markets.

For future upgrades and fast assembly/disassembly, EZPPC 70 (EZPOS 70) adopts tool-free and idiot-proof modular design, everyone can assembly/disassembly EZPPC 70 (EZPOS 70) without special tool and install/replace all main modularized components intuitionally.

What you benefit from high compatibility and extensibility, easy and fast assembly/disassembly, and modular design of EZPPC 70 (EZPOS 70) are low budget and short maintenance time-cost, which helps enterprise to cut-down cost and make more profit.

EZPPC 70 (EZPOS 70) supports most popular Microsoft Windows series operation system (Windows XP Home Edition, Windows XP Professional Edition, WEPOS and Linux, making user spend less effort on technology and software-related issues— so user can devote all energy making your business successful.

Features:

- Intel® low power consumption and high performance technology
- Durable ultra-slim & robust die-casting aluminum chassis
- Smart Battery Backup - supply voltage more than one hour without any external power supply
- Tool-free and modular design - easy upgrade and assembly/disassembly
- 4x USB 2.0,1 x RS-485/422/232, 3 x RS-232, Gigabit Ethernet port (RJ-11) and cash drawer port (RJ-11) equipped
- Wireless LAN supported
- Microsoft Windows series operation system (Windows XP Home Edition, Windows XP Professional Edition and WEPOS) and open-source Linux operation system supported.

2.

Unpacking the Box

Verify that the box contains the following items.

1	Device X 1
2	Base X 1 (EZPOS 70 series only)
3	Power Adaptor X 1
4	Power Cord X 1
5	Driver and utility CD X 1
6	Wall mount Kit x 1 (EZPPC 70 series only)

3.

Hardware Setup

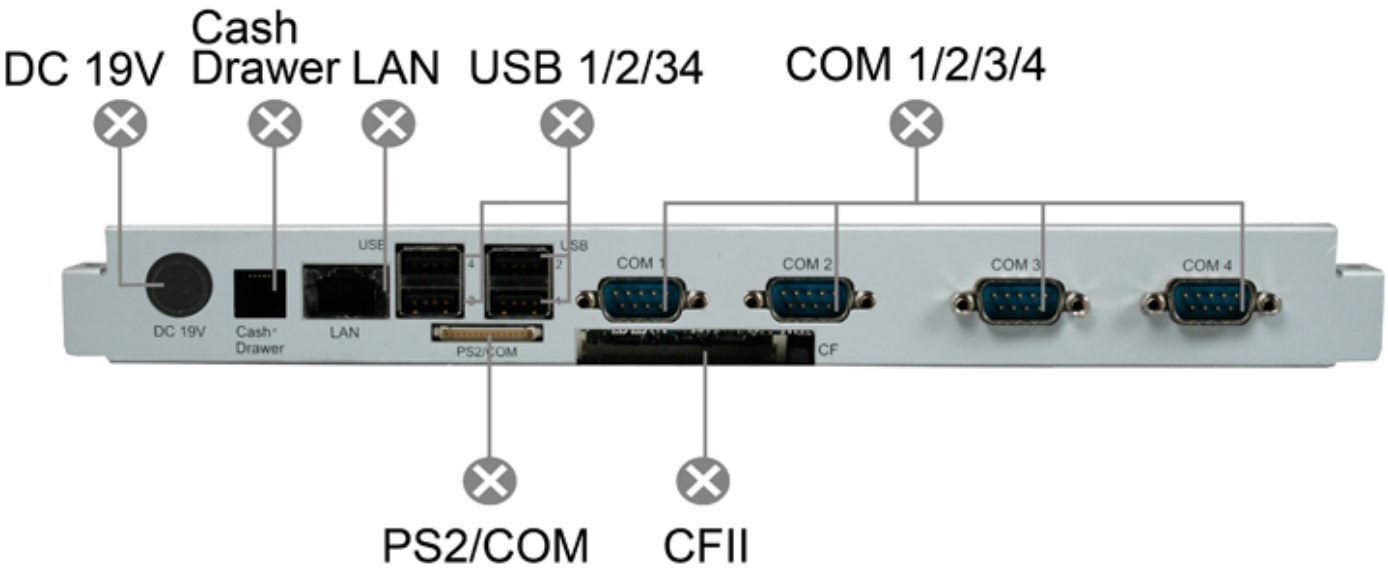
3.1. Quick Tour

Front View

LED Indicator

	The **Power** indicator will glow green when power is on.
	The **HDD** indicator will blink green when the HDD is accessed.
	The **LAN** indicator will blink green when transferring data though the LAN.

Back Panel I/O



Note: For details of I/O ports on the back panel, please refer to Chapter 7 – I/O Definition.

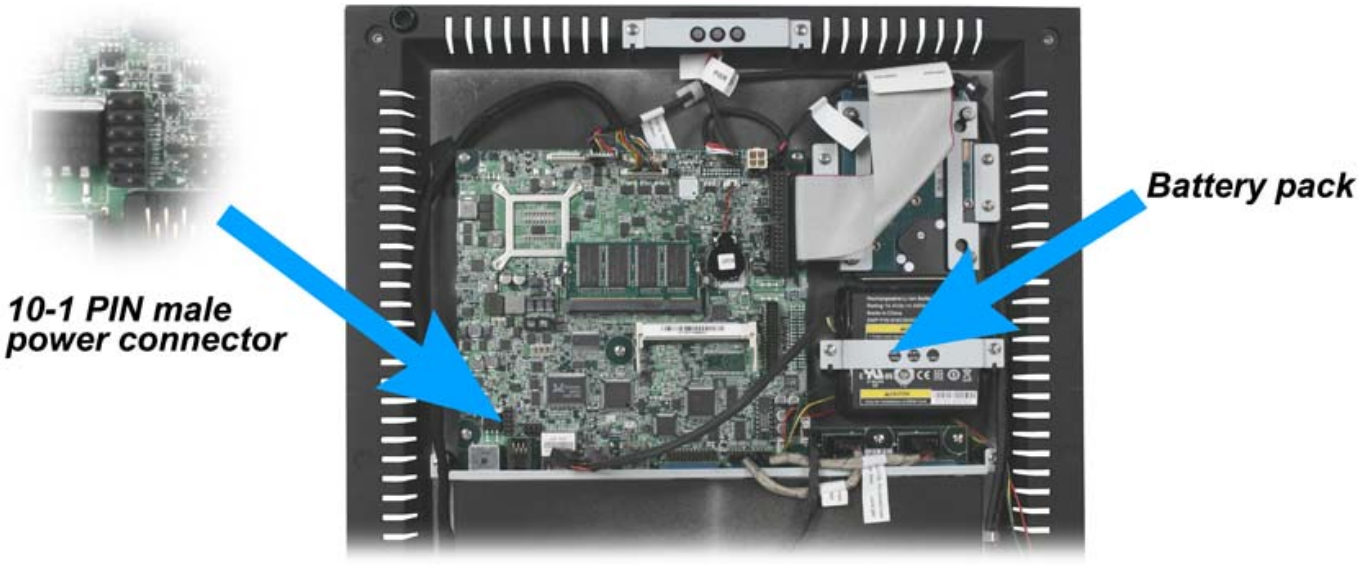
3.2. Connect Battery Pack

Before power-on the device, please connect the battery to the mainboard:

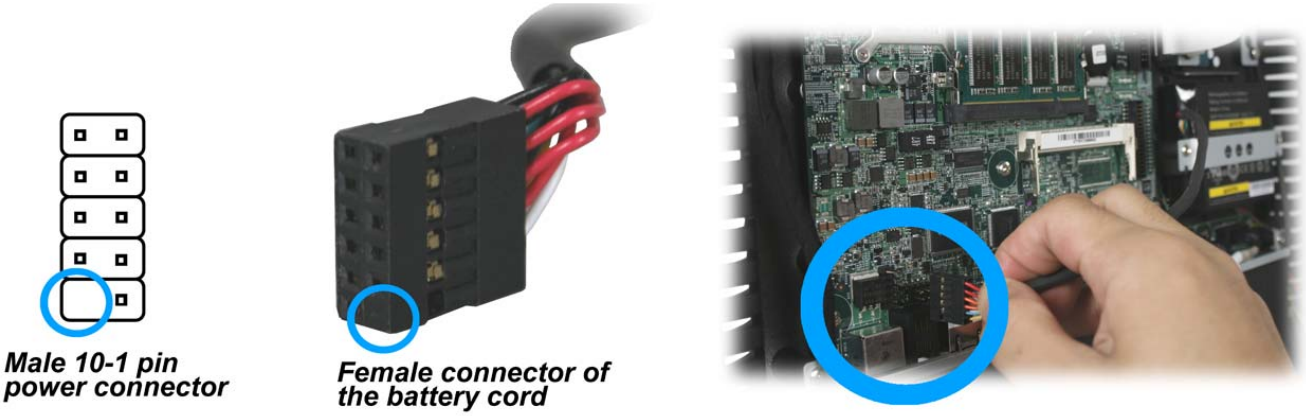
1. Un-tighten two screws on the back panel anticlockwise.

2. Open the back panel.

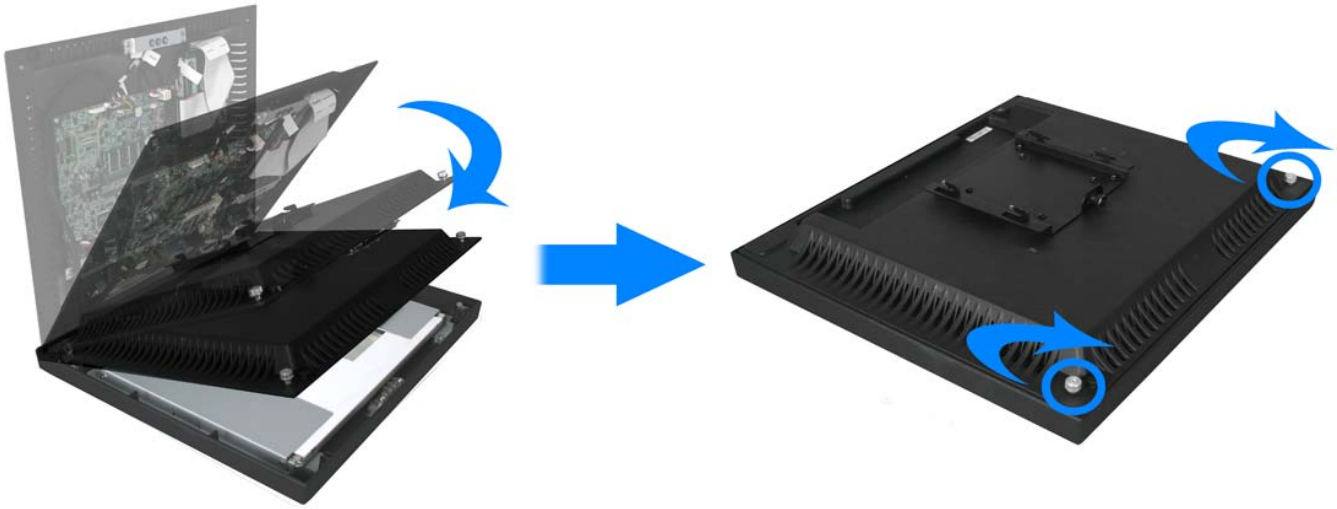
3. For the location of the battery pack and the 10-1 pin male power connector, please refer the picture shown below.



3. Plug the power cable to the 9-pin power connector in the correct orient.



4. Close the back panel and tighten two screws on the back panel.



3.3. Peripherals Installation

Power Adapter

Connect the 4-pin output jack of the adapter to the **DC 19V** jack on the back panel of the device.

USB Mouse, USB Keyboard and USB ODD

Connect your USB Mouse, USB Keyboard and USB ODD to **USB** ports on the back panel of the device.

LAN Cable

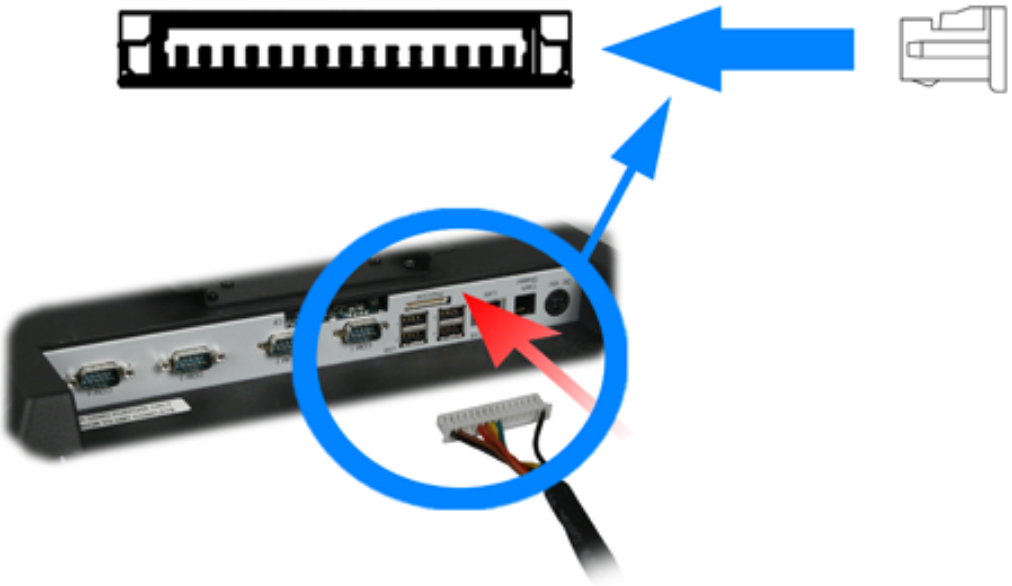
Connect one end of RJ-45 LAN cable to the **LAN** port on the back panel of the device, another end to your internet device.

Cash Drawer

Connect one end of RJ-11 cable to the **Cash Drawer** port on the back panel of the device, another end to your cash drawer.

MSR

1. Connect the female connector of the external device to the **PS2/COM** port on the back panel of the device in the correct orient.



2. Align two screws of the MSR assembly to the holes in blue circles as shown below.

3. Tighten two screws of the MSR assembly as shown below.

4. Finished.

3.4. Adjust View Angle (EZPOS 70 series only)

Adjust the device to the proper view angle.

3.5. Turn on the Device

1. Make sure all peripherals are connected properly.

2. Press and hold the power switch until the power indicator on the front panel glow green.

4.

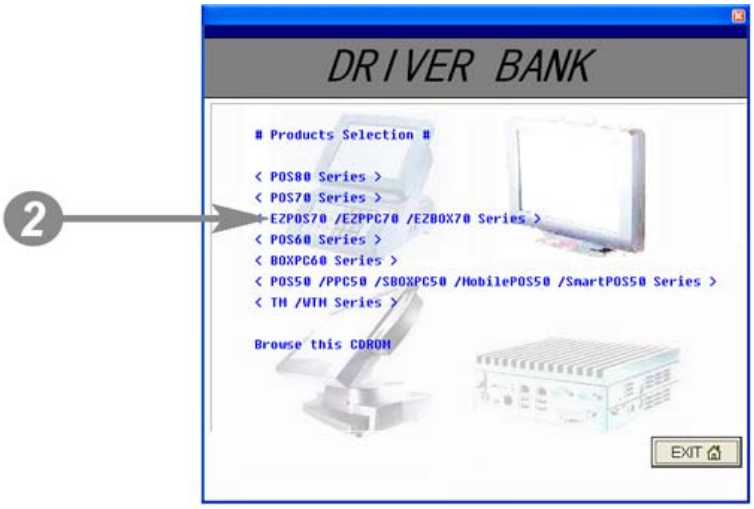
Driver and Utility Installation

4.1. Before the installation

All installation procedures described below are based on Microsoft Windows XP.

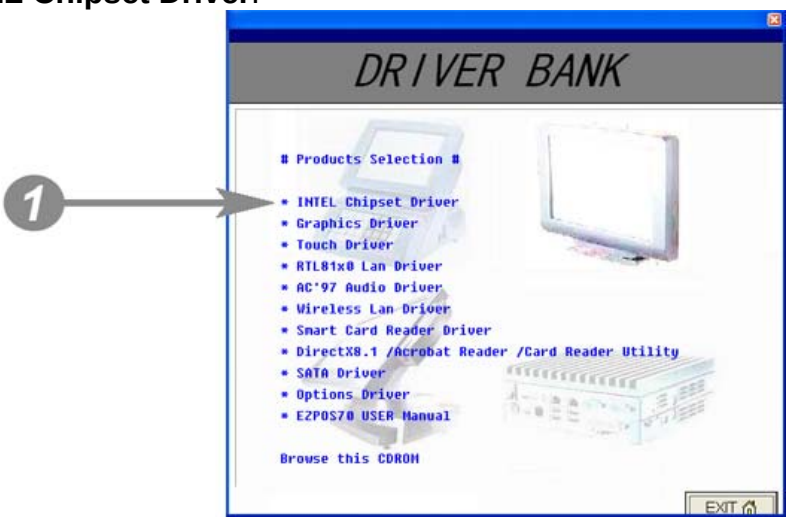
1. Connect an external USB CDROM drive to the USB port and insert the driver CD and turn on the device. The program autoruns and displays the ***DRIVER BANK*** screen.

2. Click "**EZPOS70 /EZPPC70 /EZBOX70 Series**".

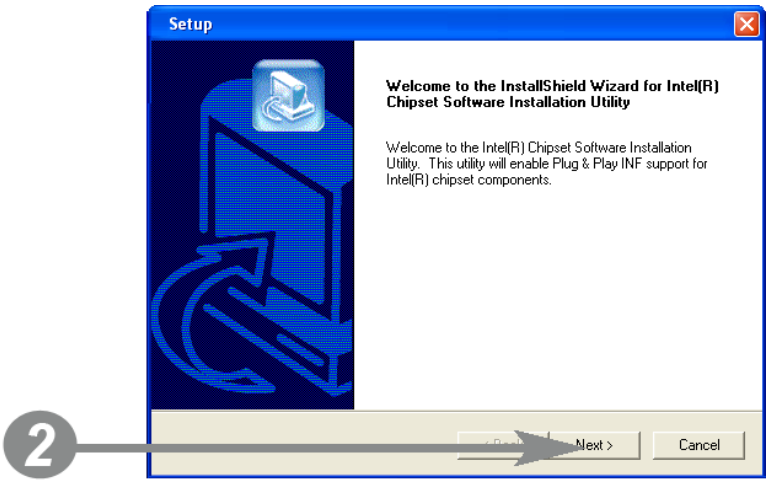


4.2. Chipset Software Installation

1. Click **INTEL Chipset Driver**.

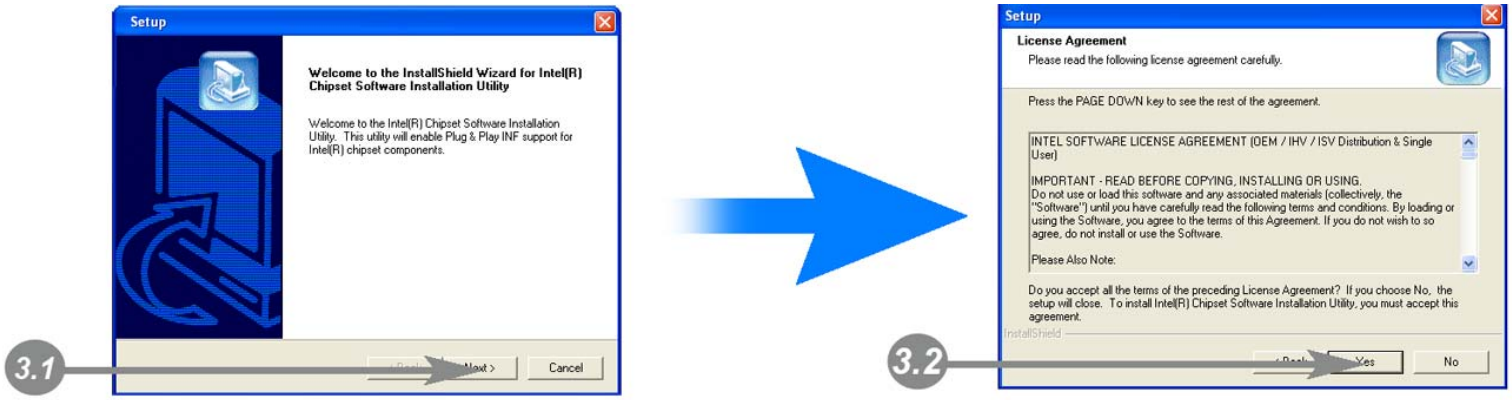


2. Click **Next**.

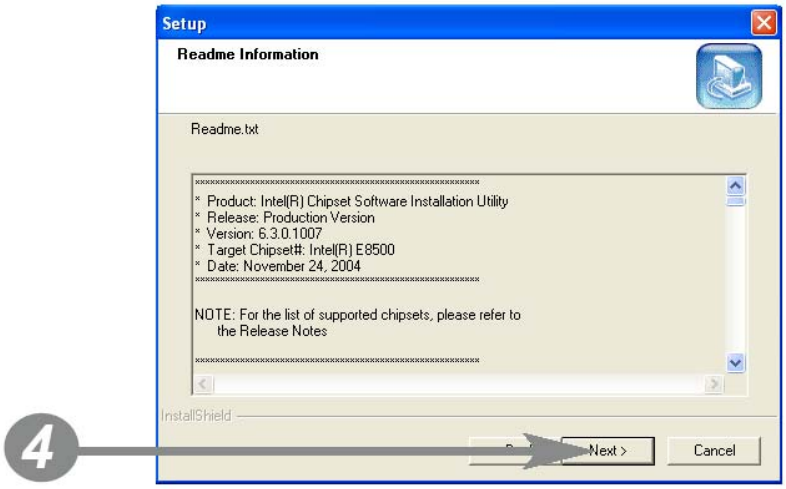


3.1. Click **Next**.

3.2. Read the License Agreement carefully and click **Yes**.

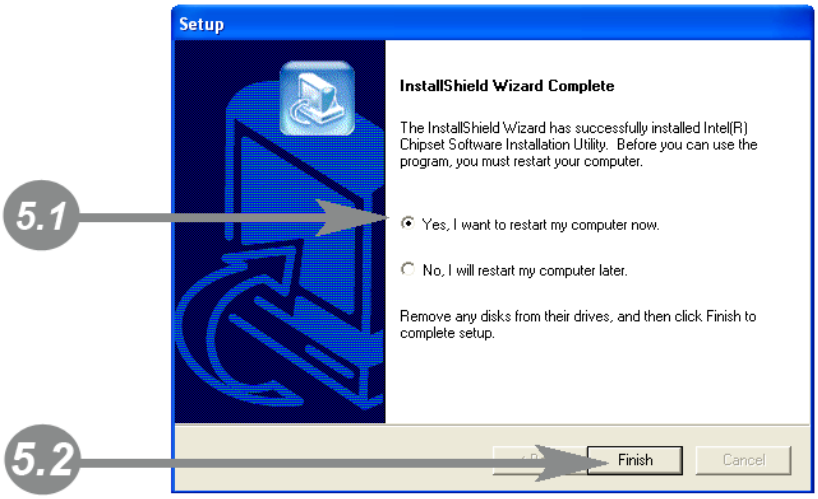


4. Click **Next**.



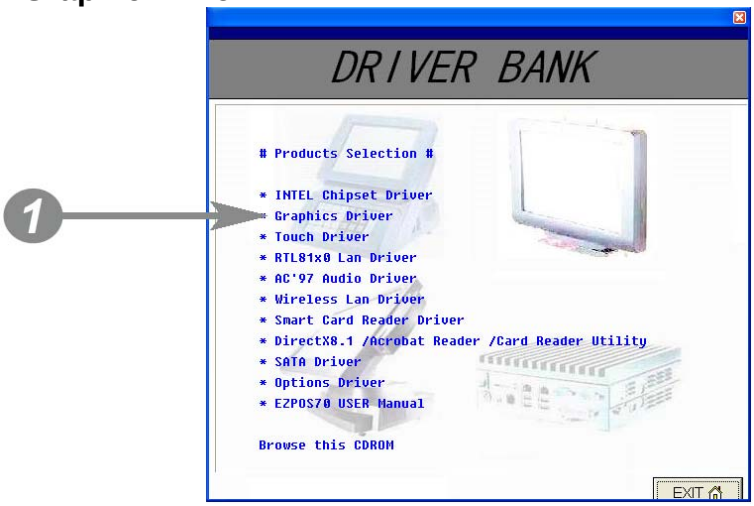
5.1. Select restart your computer right now or later.

5.2. Click **Finish**.

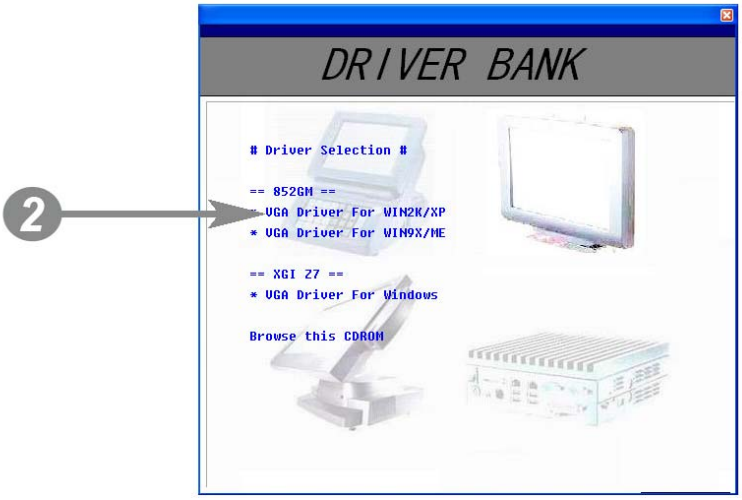


4.3. VGA Driver Installation

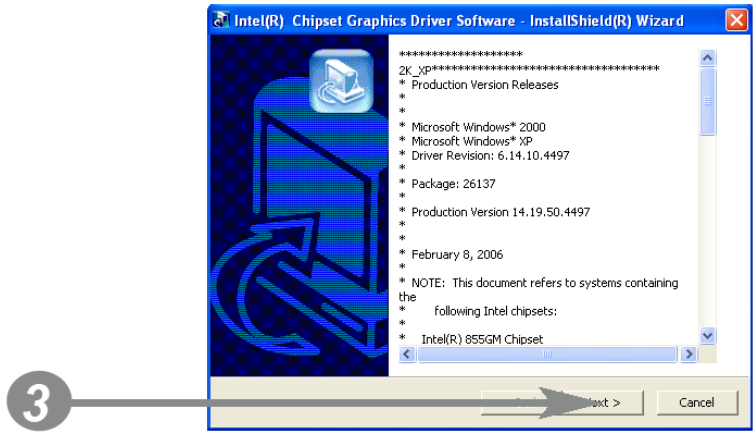
1. Click **Graphic Driver**.



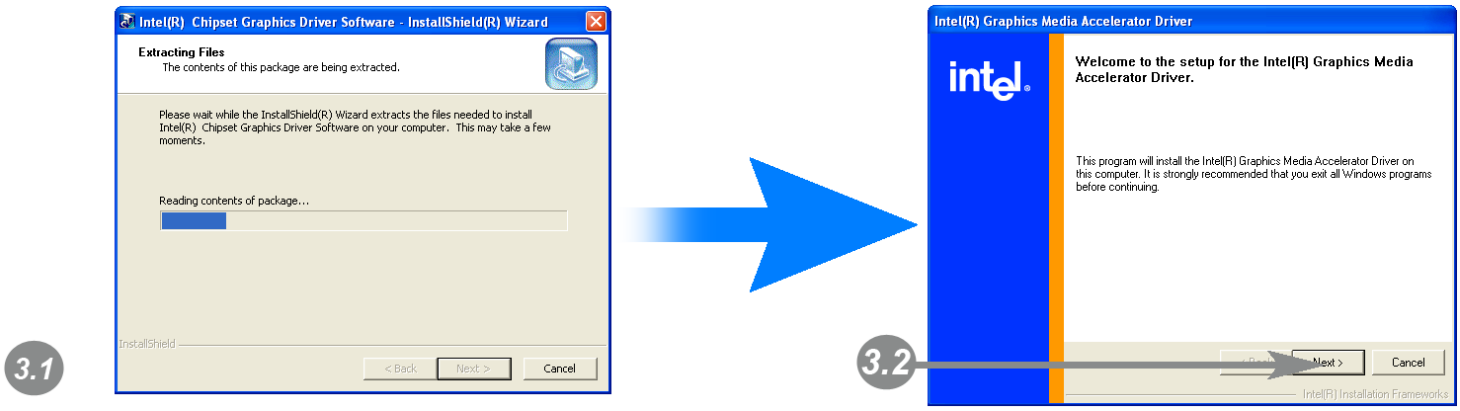
2. Click **VGA Driver for WIN2K/XP**.



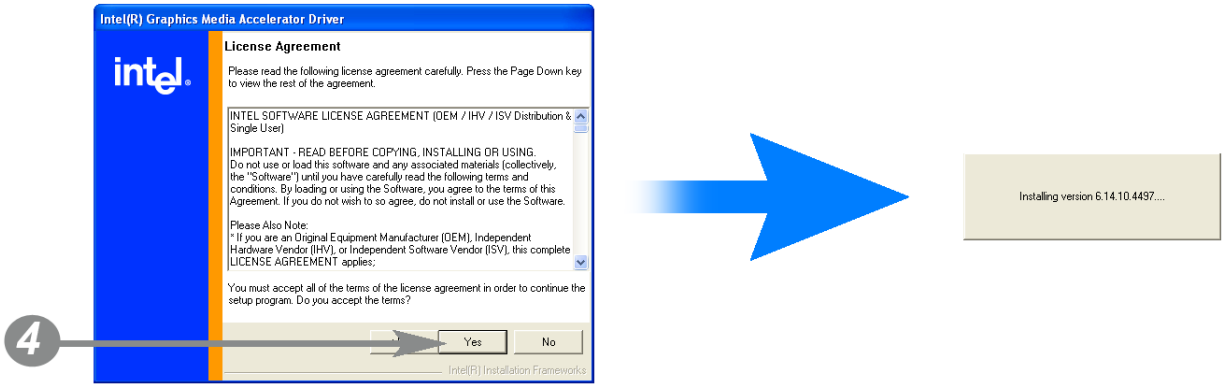
3. Click **Next**.



3.1. After files extracted, click **Next** on the welcome screen.

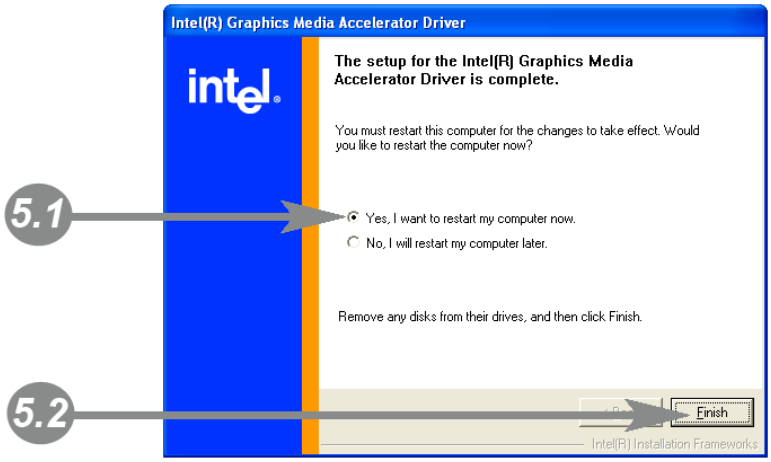


4. Read the License Agreement carefully and click **Yes**, and then the installation starts.



5.1. Select restart your computer right now or later.

5.2. Click **Finish**.

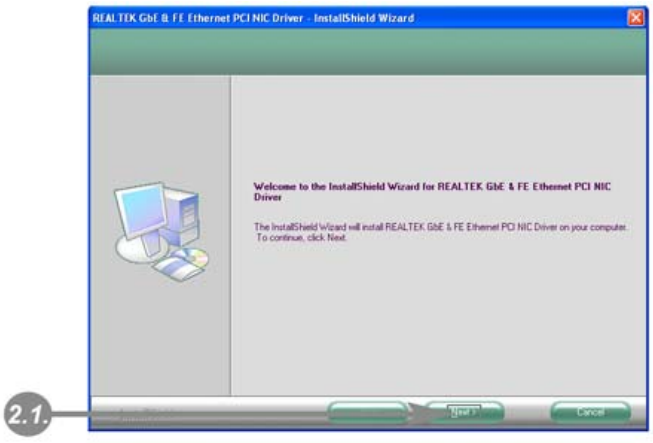


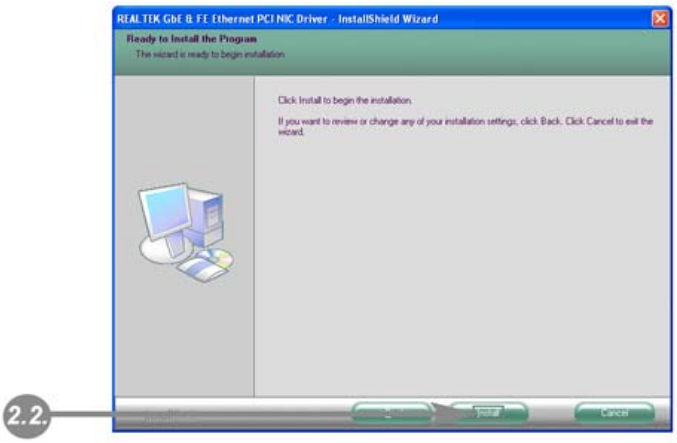
4.4. LAN Driver Installation

1. Click **RTL81x0 LAN Driver**.

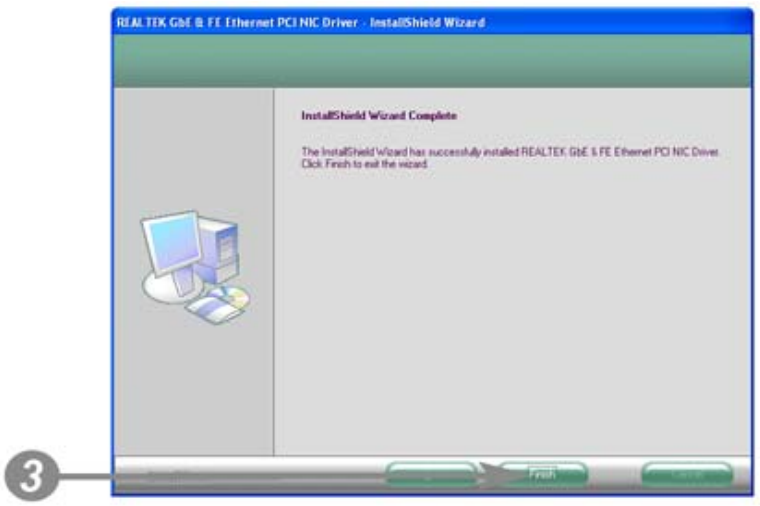
On the welcome screen, click **Next**.

Click Install to begin the installation.



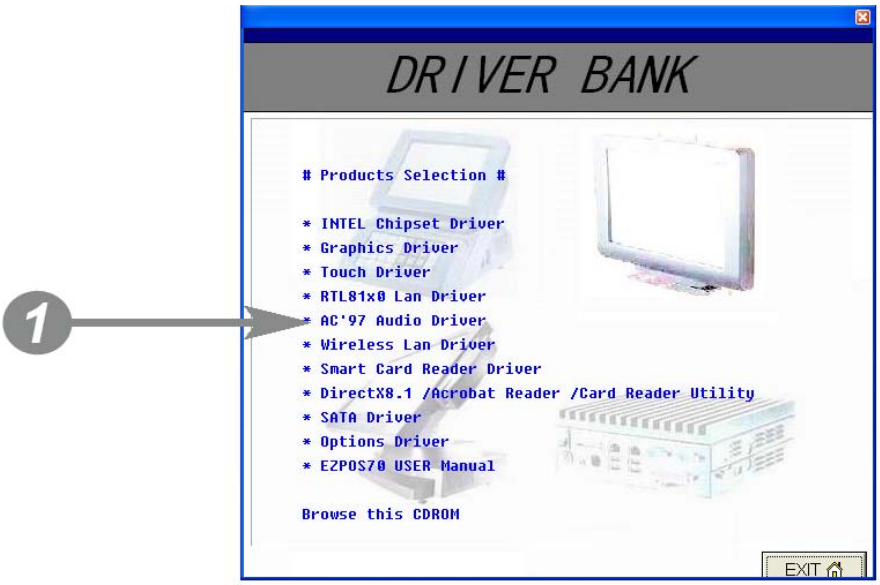


3. Click **Finish**.

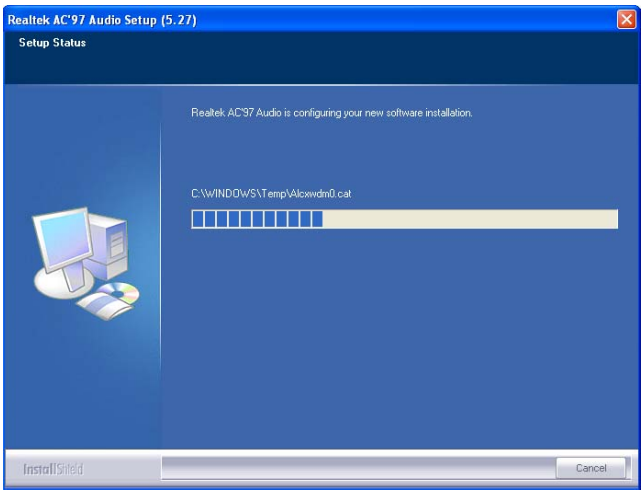


4.5. Audio Driver Installation

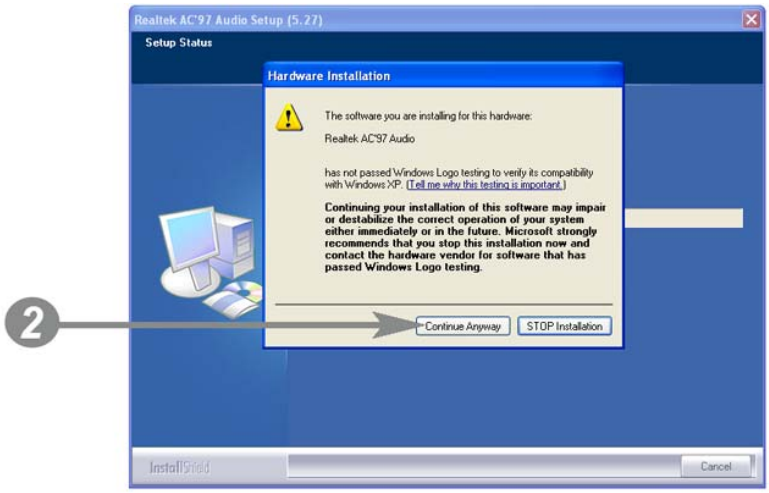
1. Click **AC'97 Audio Driver.**



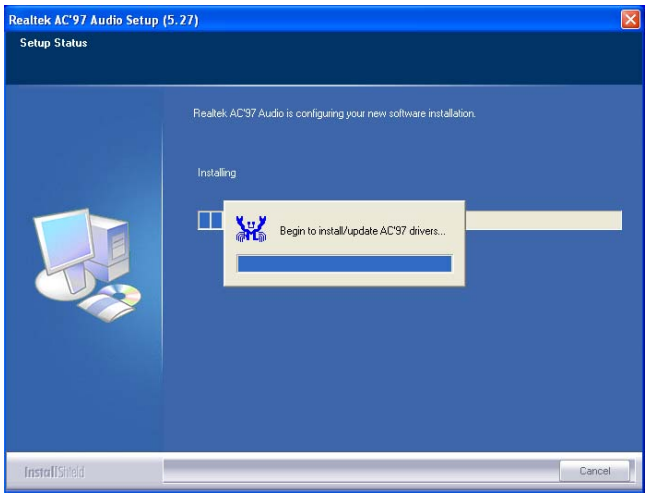
2. Configures new software installation.



3. Click **Configure Anyway**.

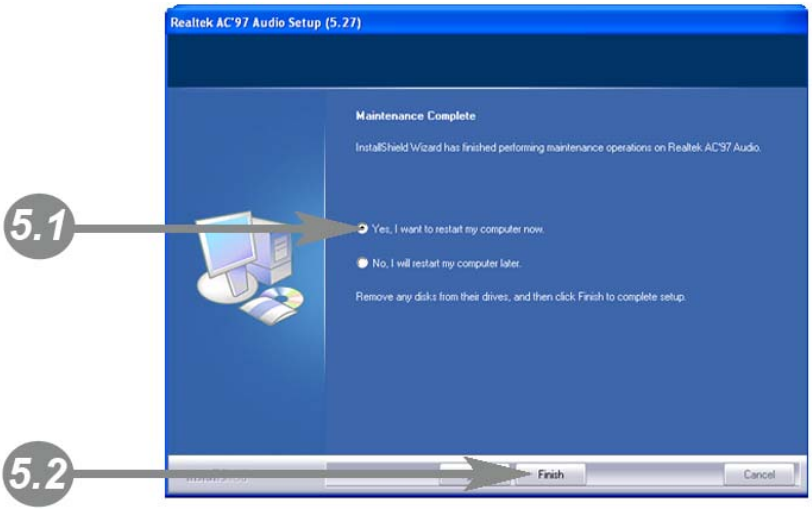


4. AC'97 drivers begins to install.



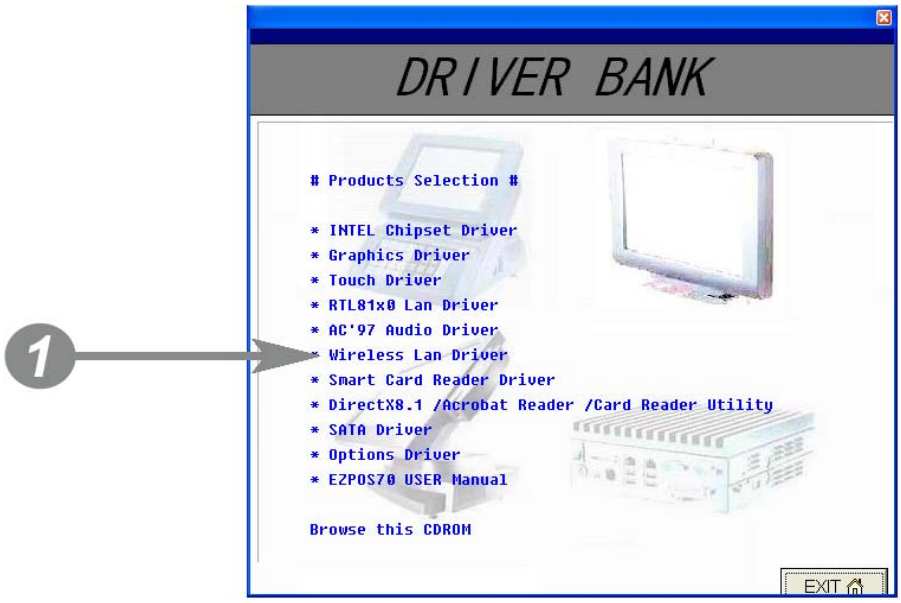
5.1. Select restart your computer right now or later.

5.2. Click **Finish**.

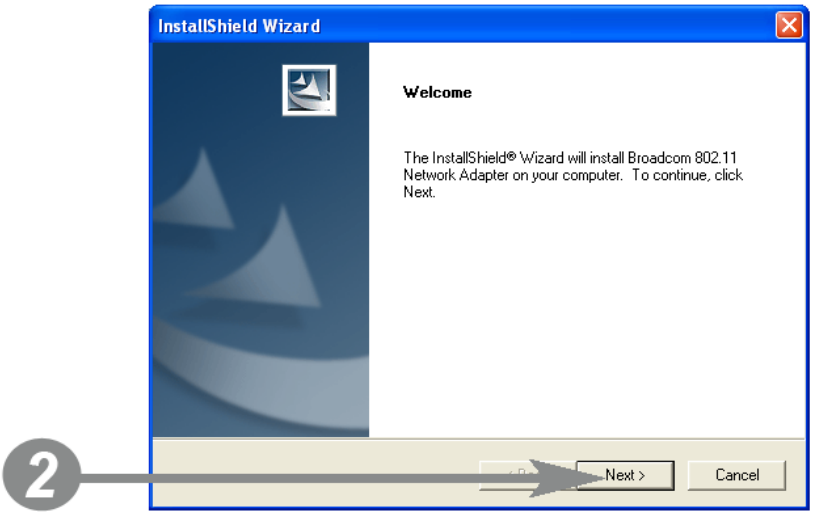


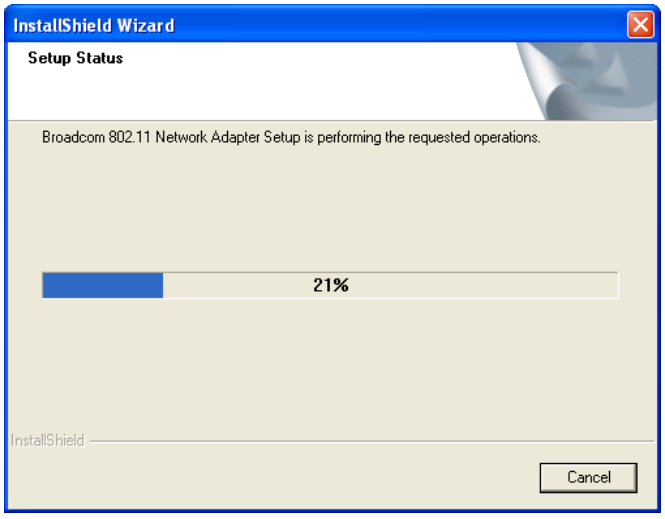
4.6. Wireless LAN Driver Installation

1. Click **AC'97 Audio Driver.**



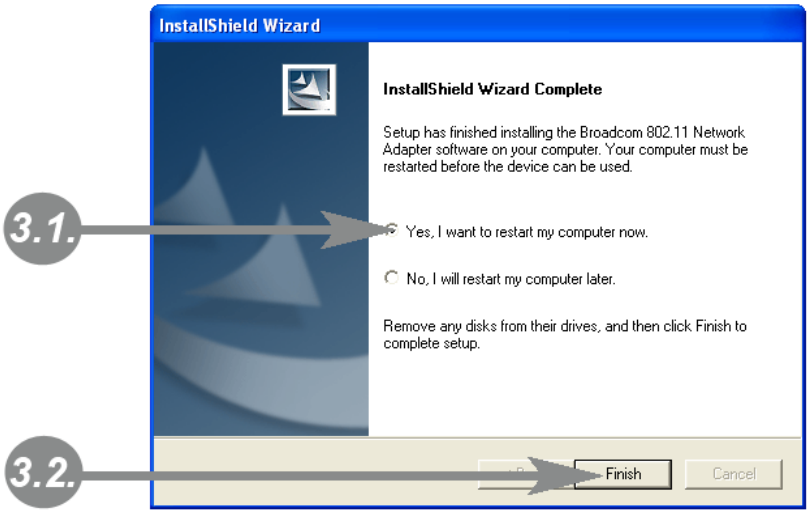
2. On the welcome screen, click **Next**, and then the installation begins.





3.1. Select restart your computer right now or later.

3.2. Click **Finish**.



5.

Power Management

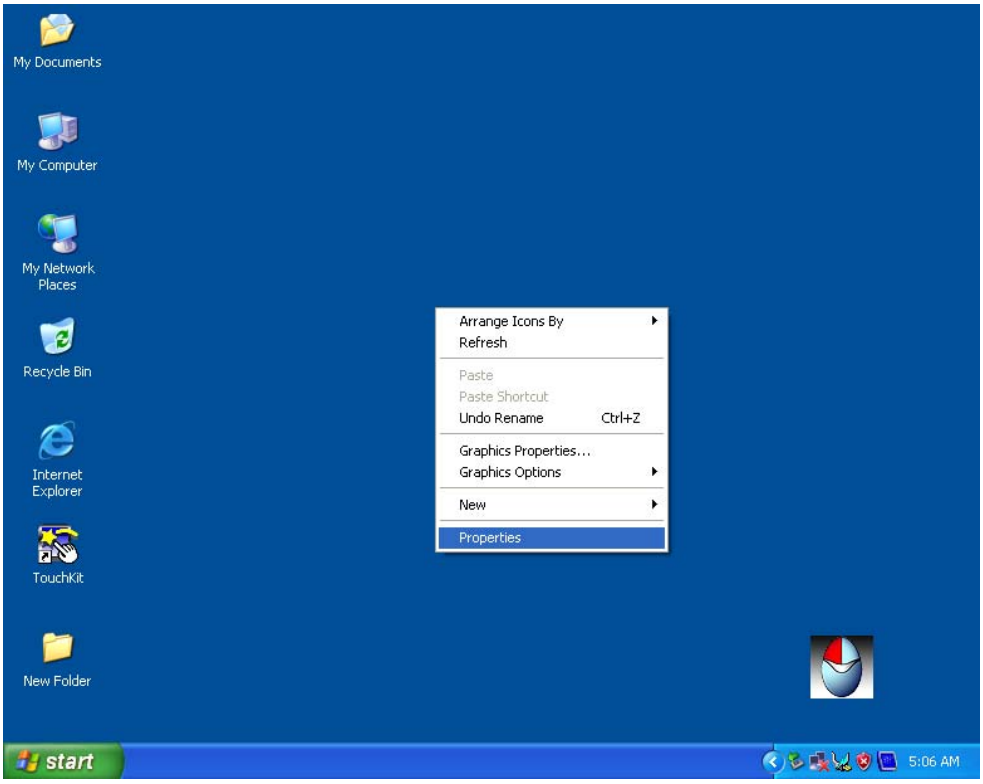
The backup battery equipped on EZPPC 70 (EZPOS 70) series is as “smart” as the battery for Notebook or handheld device; you can adjust any power management option that your unique hardware configuration supports.

5.1. Enter Power Option Properties Sheet

There are two alternatives to enter **Power Options Properties** property sheet.

Option 1:

1. Right-click on the Desktop and select **Properties**.



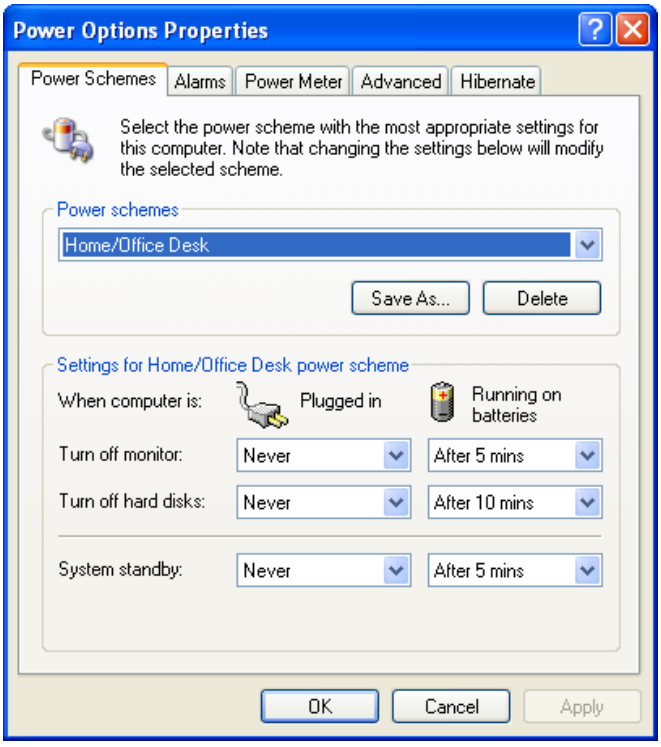
2. Click **Screen Saver** tab, and then click **Power** button.

Option 2:

1. Click **Start**, click **Settings**, click **Control Panel**, and then double-click **Power Options**.

5.2. How to Set Power Options

Power Schemes



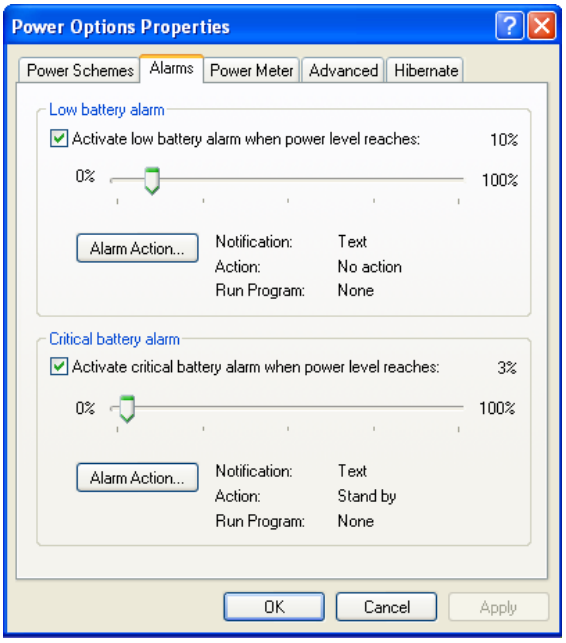
You can configure power settings under **Power Schemes** tab**.**

Under **Power schemes** area, click the drop-down list to choose a power scheme to apply settings that fit the way you use EZPPC 70.

Under **Settings for Home/Office Desk Power scheme** area, set all parameters by clicking drop-down lists to put EZPPC 70 (EZPOS 70) on standby mode and turn off your monitor and hard disks automatically to save power upon your actual needs.

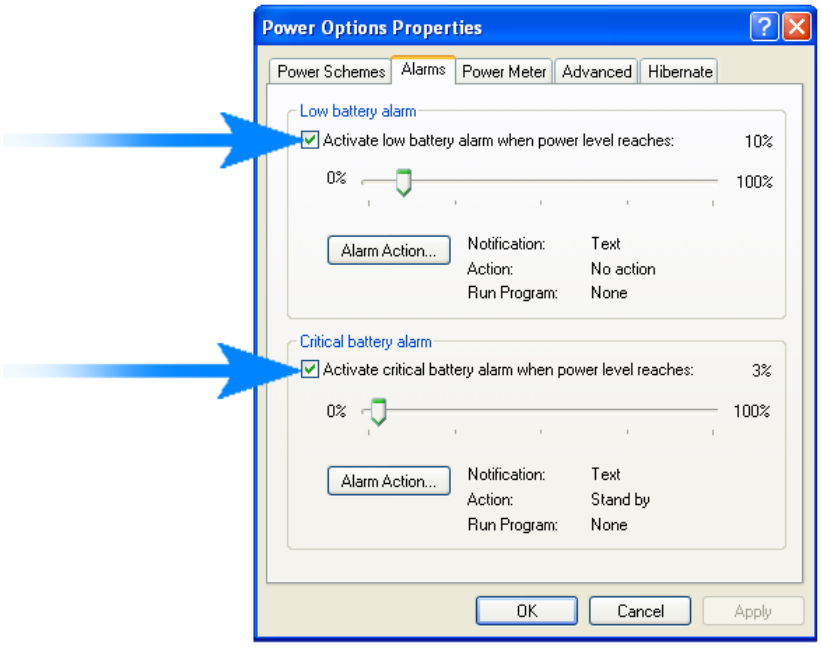
Alarms

You can set two kinds of low battery warning you'll receive when battery power gets low and what action will be taken for EZPPC 70 (EZPOS 70) under **Alarms** tab.



Low battery alarm and Critical battery alarm

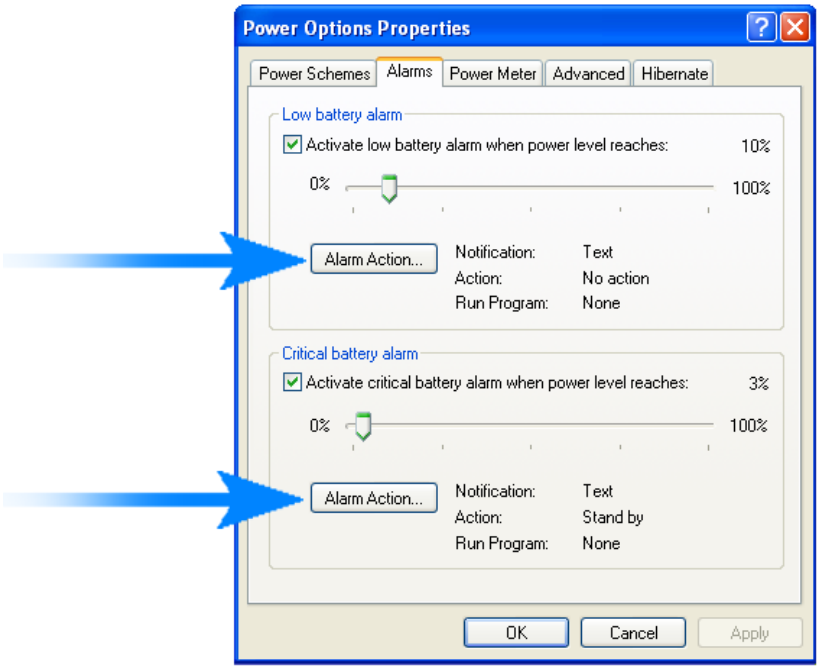
Check the box to enable **Low battery alarm** and **Critical battery alarm** function.



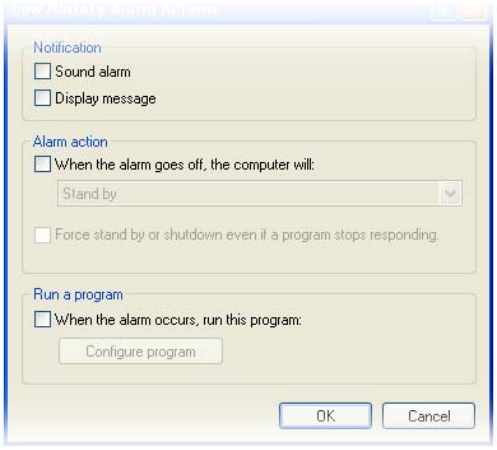
Specify how much power level to activate these two alarms by dragging the green-white slider.

Alarm Action

Click **Alarm Action** to enter alarm actions setting sheet.



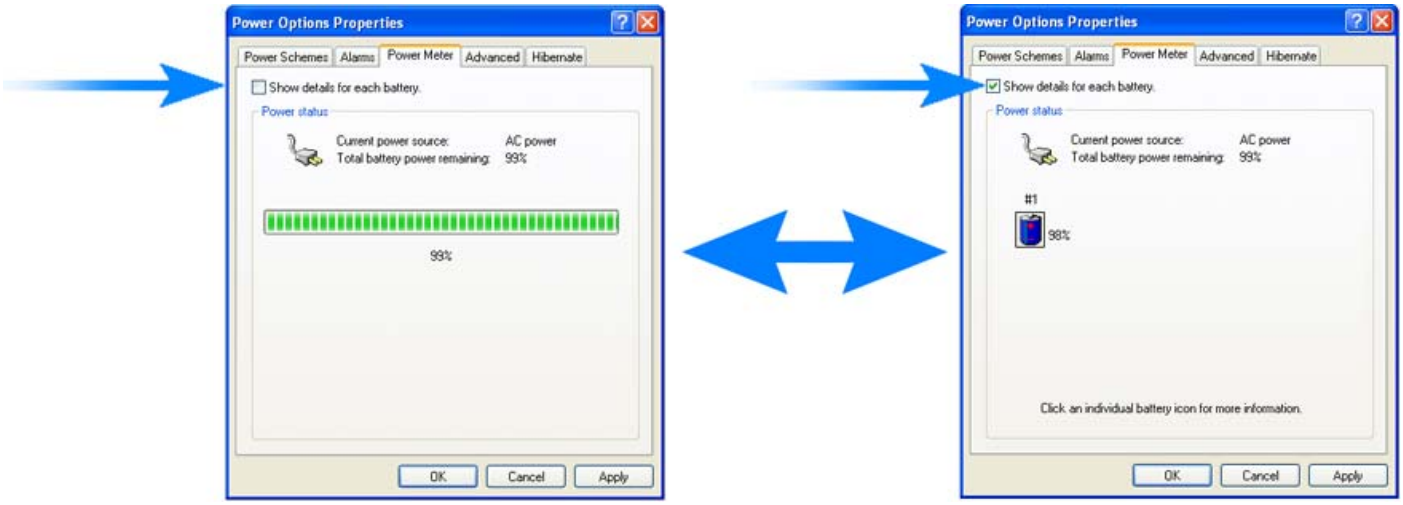
On alarm actions setting sheet, select the type of alarm notification, which action EZPPC 70 (EZPOS 70) will take and which program will launch when the alarm occurs.



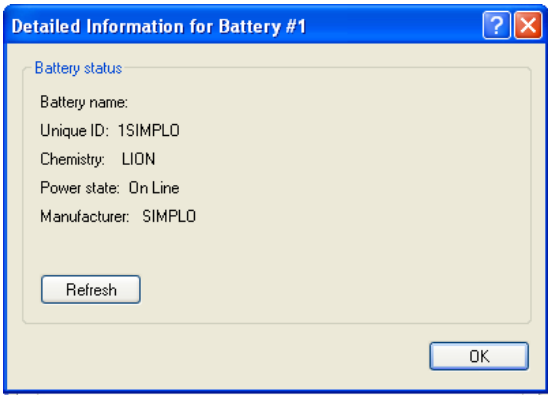
Power Meter

You can check power status under **Power Meter** tab.

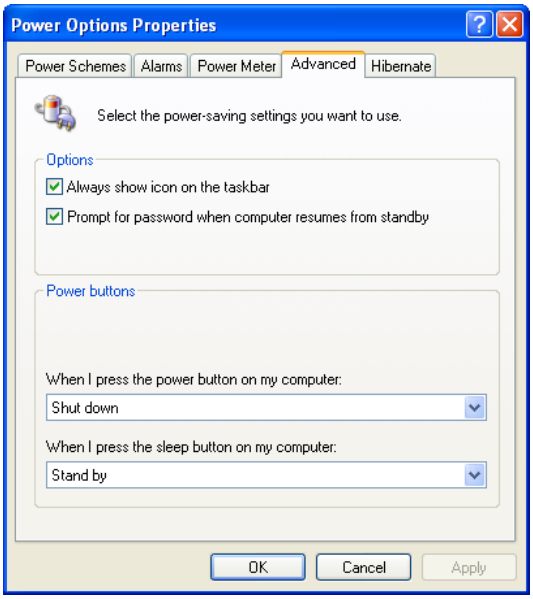
Check or uncheck the box to switch icon view and bar chart view.



Under the icon mode, click the battery icon to show the detailed information about the battery.



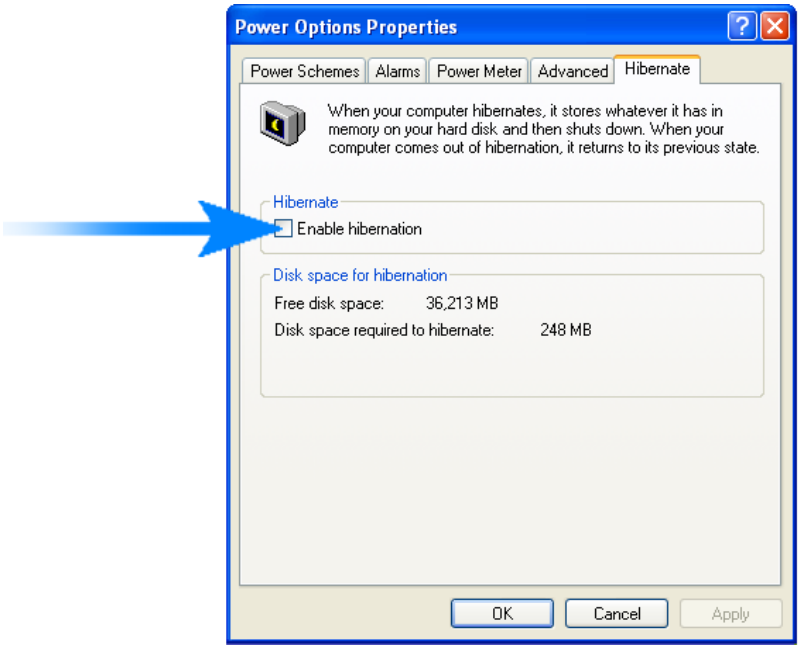
Advanced



You can specify power-saving settings by checking boxes in Options area and clicking drop-lists in Power button under **Advanced** tab.

Hibernate

Enable the hibernate function by checking **Enable hibernation** box.



6.

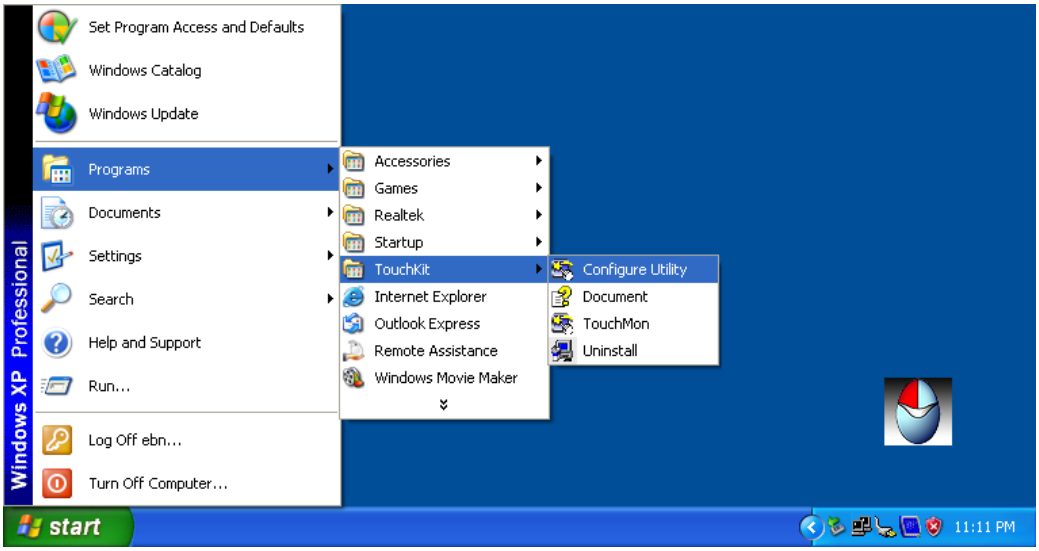
TouchKit Utility Quick Guide

6.1. Launch TouchKit Utility

There are two alternatives to launch **TouchKit**.

Option 1:

Under Microsoft Windows XP, click “**start**” menu and select “**Programs**”, under ”**TouchKit**” menu, click “**Configure Utility**”.

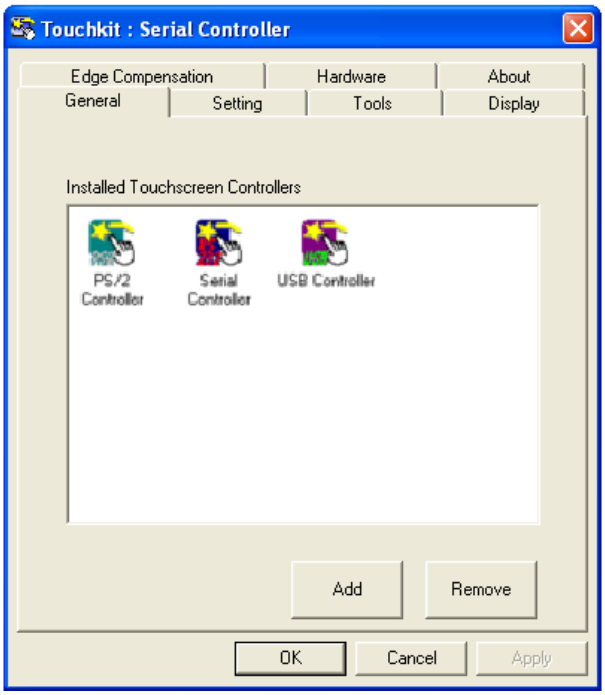


Option 2:

Click icon on the task bar to launch **TouchKit** utility.

6.2. General

The **General** tab in **Touchkit utility** shows all of **TouchKit** touchscreen controllers installed as below, including RS232, USB and PS2 interfaces.



Add

The function button is used for serial RS232 controllers only. Press this button to search the **TouchKit** serial controllers connected with the COM ports of EZPPC 70. Whenever it finds a new **TouchKit** serial controller, a new serial controller icon object will be shown in the controller list window automatically.

USB **TouchKit** device supports plug and play, the icon object for USB controller will be shown in the controller list window automatically when the USB controller is connected with the USB port of EZPPC 70. And, the icon object for the USB controller will disappear automatically as soon as the device was removed from the USB port of EZPPC 70.

TouchKit PS2 driver support PS2 mouse and **TouchKit** touchscreen controller. It can works with both PS2 mouse and **TouchKit** touchscreen PS2 controller. After the **TouchKit** PS2 driver was installed, this utility assumes the PS2 touchscreen controller exists and is always shown in the controller list window.

Remove

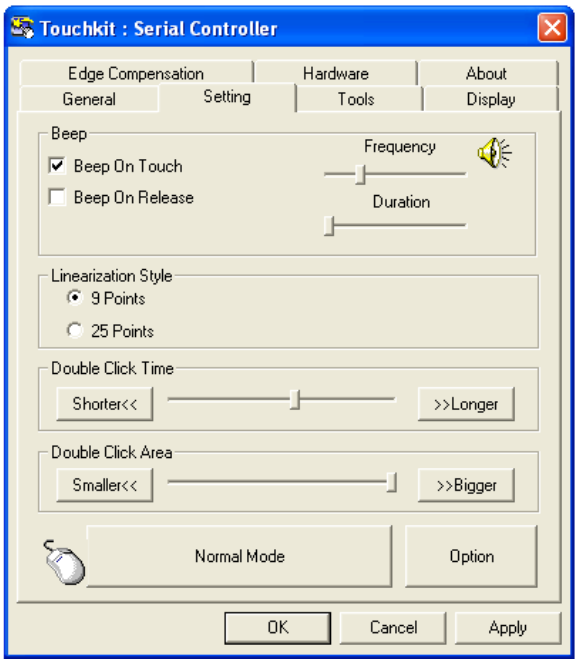
This function button is used for serial RS232 controllers only. This button will be grayed and disabled automatically when the selected controller in the controller list window is not RS232 type. Press to remove and uninstall the selected serial RS232 controller from EZPPC 70. Then, this serial RS232 icon object in controller list window disappears automatically.

USB TouchKit device supports plug and play, the icon object for USB controller will be shown in the controller list window automatically when the USB controller is connected with the USB port of EZPPC 70. And, the icon object for the USB controller will disappear automatically as soon as the device was removed from the system USB port.

TouchKit utility does not allow you to remove/uninstall the PS2 device driver dynamically. To uninstall the **TouchKit** PS2 driver, You needs to go to Windows Device Manager to do un-installation. In addition, after PS2 un-installation, it needs to reboot EZPPC 70 (EZPOS 70) to complete un-installation.

6.3. Settings

There are function buttons and check boxes in the **Settings** tab.



Beep

Beep On Touch

Check this check box to enable driver to generate a beep sound when touch touchscreen state is switched from untouched to touched state.

Beep On Release

Check this check box to enable driver to generate a beep sound when touchecreen state is switched from touched state to untouched state.

Frequency

Drag the slider to adjust this frequency to control the beep sound frequency generated by the driver.

Duration

Drag the slider to adjust this duration to control the beep sound duration.

Linearization Style

TouchKit utility provides you with both 9 points and 25 points calibration for linearization. You can select the suitable linearization type.

Double Click Time

Double Click Time is used to set double click time. Change this value will affects the double click behavior for all of the mouse devices connected to EZPPC 70. Two continuous clicks at the same area within this specified time period will be recognized as a double click event.

Double Click Area

Double click area is used to set the double click area. Change this value will affects the double click behavior for all of the mouse devices

connected to EZPPC 70. Two continuous clicks with this specified area in the specified double click time will be recognized as a double click event.

Mouse Emulation Mode

Change the emulation mode by pressing on this button.

Normal Mode

Normal mode behaves mouse button down and mouse move. You can select this mode to select object, and dragging the object.

Click On Touch

With this **Click On Touch** mode, the driver emulates a mouse click event when the touchscreen state was switched from un-touched state to touched state. Then, the driver always generate mouse move event and is tracking the touch position until the touchscreen state switched to un-touch state.

Click On Release

With this **Click On Release** mode, the driver emulates a mouse click event when the touchscreen state was switched from touched state to un-touched state.

Click On Touch without moving cursor

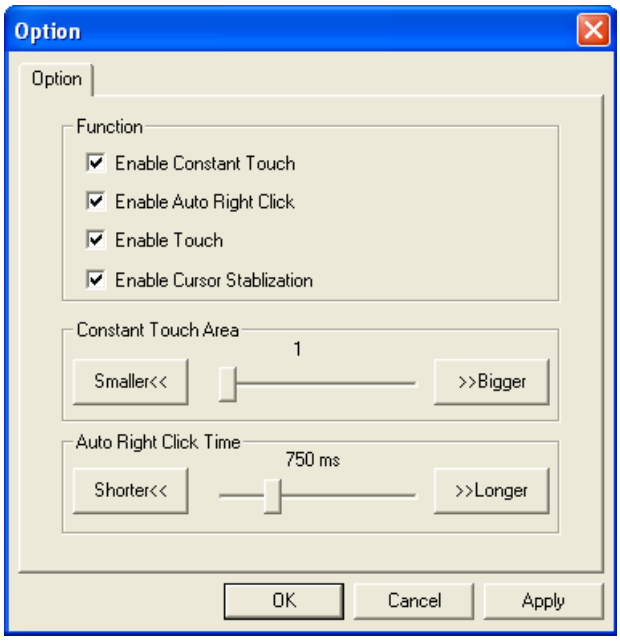
With this mode, the driver behaves similar as **Click On Touch** mode. The cursor does not move to the touch position except the first touch point.

Click On Release without moving cursor

With this mode, the driver behaves similar as **Click On Release** mode. The cursor does not move to the touch position except the lift-off point.

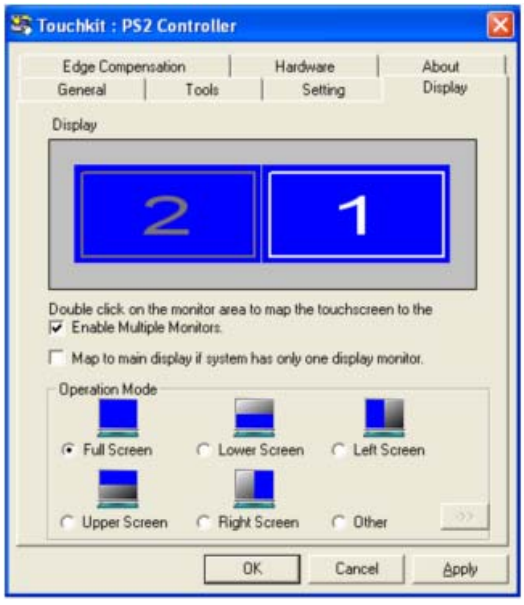
Option

You can set configuration for some advanced functions with this option button. Press this button, a pop up property sheet window will be popped up and shown as below.



6.4. Display

TouchKit driver utility supports multiple monitor and display system. To work with multiple monitor system, you need to do proper configuration to map the touchscreen working area to the correct system display area. You can do such configuration with this property page shown as below,



Please follow below instructions to do the configuration:

Enable multiple monitor

Check this check box to enable multiple monitor support and uncheck it to disable multiple monitor support. When this function is disabled, the touchscreen will be mapped to the primary monitor automatically.

When this function is enabled, user can double click on the monitor area in the monitor geometry window to assign the monitor area where the touchscreen will be mapped. In other word, the touchscreen will work with the selected monitor. Then, the selected monitor area rectangle line will be changed to be white and the other monitor rectangles line will be grey.

Map to main monitor when the system has only one monitor

When the multiple monitor function was enabled, and the system has only one monitor.

Driver allows user to generate the mouse event for the primary monitor or not when the touchscreen which were not mapped to primary monitor. Check the check box to enable this function, then, the driver will generate the mouse event for the primary monitor even through the touchscreen was configured as other monitor mapping and multiple monitor function enabled.

Operation Mode

TouchKit driver support split display mode for those applications which do not map the touchscreen to the full screen of the monitor.

Full screen

The touchscreen will be mapped to the full screen of the specified monitor.

Right screen

The touchscreen will be mapped to the right half screen of the specified monitor.

Left screen
The touchscreen will be mapped to the left half screen of the specified monitor.

Upper screen
The touchscreen will be mapped to the upper half screen of the specified monitor.

Lower screen
The touchscreen will be mapped to the lower half screen of the specified monitor.

Other operation mode

Quarter 1
The touchscreen will be mapped to the first quarter area of the specified monitor display.

Quarter 2
The touchscreen will be mapped to the 2nd quarter area of the specified monitor display.

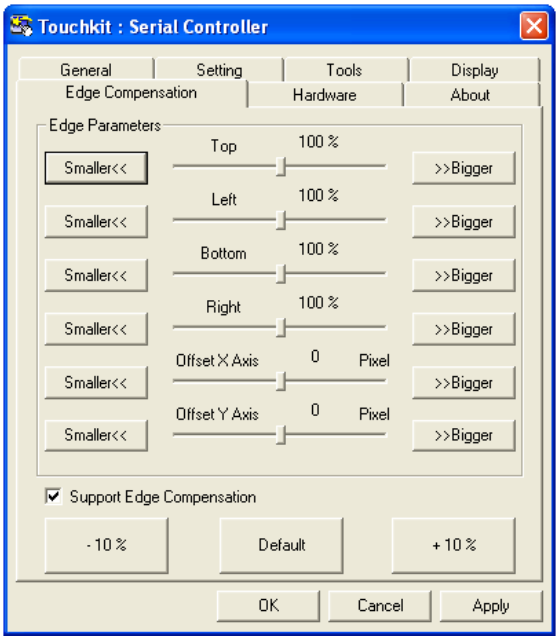
Quarter 3
The touchscreen will be mapped to the 3rd quarter area of the specified monitor display.

Quarter 4
The touchscreen will be mapped to the 4th quarter area of the specified monitor display.

Customized
If the touchscreen needs to be mapped the area other than the above area, user can define the mapping area for application. With this mode, the driver does not correct the mapping area when the display resolution changed. It needs to do configuration setting again whenever the display resolution changed.

6.5. Edge Compensation

Edge Compensation property page contains functions of **Edge Compensation** for Top, Bottom, Left, Right, X Axis and Y Axis.



In some cases, if it is difficult to touch items at the edges of the touch panel, you can set adjustment to reach the edges of the screen image.

Top

If you set the Edge to "Smaller", **TouchKit** will reduce the horizontal position of the top edge. If you set the Edge to "Larger", **TouchKit** will extend the horizontal position of the top edge.

Bottom

If you set the Edge to "Smaller", **TouchKit** will reduce the horizontal position of the bottom edge. If you set the Edge to "Larger", **TouchKit** will extend the horizontal position of the bottom edge.

Left

If you set the Edge to "Smaller", **TouchKit** will reduce the vertical position of the right edge. If you set the Edge to "Larger", **TouchKit** will extend the vertical position of the left edge.

Right

If you set the Edge to "Smaller", **TouchKit** will reduce the vertical position of the right edge. If you set the Edge to "Larger", **TouchKit** will extend the vertical position of the right edge.

In some cases, cursor will be behind the finger when you touch the panel. If you can not see the cursor when you touch down the panel, you can set **X Axis** or **Y Axis** to move the cursor.

Offset X Axis

If you set the Offset X Axis to Smaller, cursor will be moved a pixel of X Axis to left.

If you set the Offset X Axis to Larger, cursor will be moved a pixel of X Axis to right.

Offset Y Axis

If you set the Offset Y Axis to Smaller, cursor will be moved a pixel of Y Axis to top.

If you set the Offset Y Axis to Larger, cursor will be moved a pixel of X Axis to bottom.

Edge Compensation Switch

You can check **Support Edge Compensation** check box to enable/disable this function from left corner.

Edge Compensation Button

Click **+10%** or **-10%** button to adjust the smaller or larger of edge. If you click **+10%** button, the top, bottom, left and right edges will extend 10% of orientation to touch screen, and cursor will be moved 10 pixel of X and Y Axis to right and top.

If you click **-10%** button, the top, bottom , left and right edges will contract 10% of orientation to touch screen, and cursor will be

moved 10 pixel of X and Y Axis to left and bottom.

Click **Default** button to resume to the default value.

5.2. How to Use Event Selector

1. On the desktop of Windows, click icon.
2. icon change to .
3. Now the tapping is simulating right mouse button clicking.
4. After one tap on the screen, icon change to .
5. The tapping resumes to left mouse button clicking.

7.

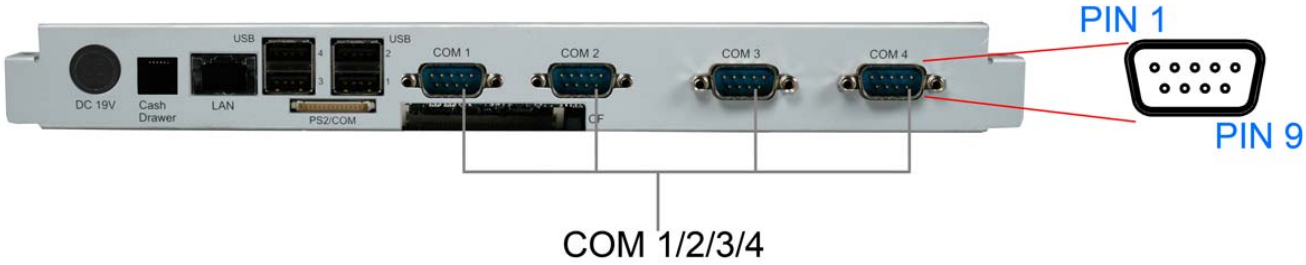
I/O Definition

Please refer the detailed technical information about all I/O ports as followings.

7.1. Power Connector

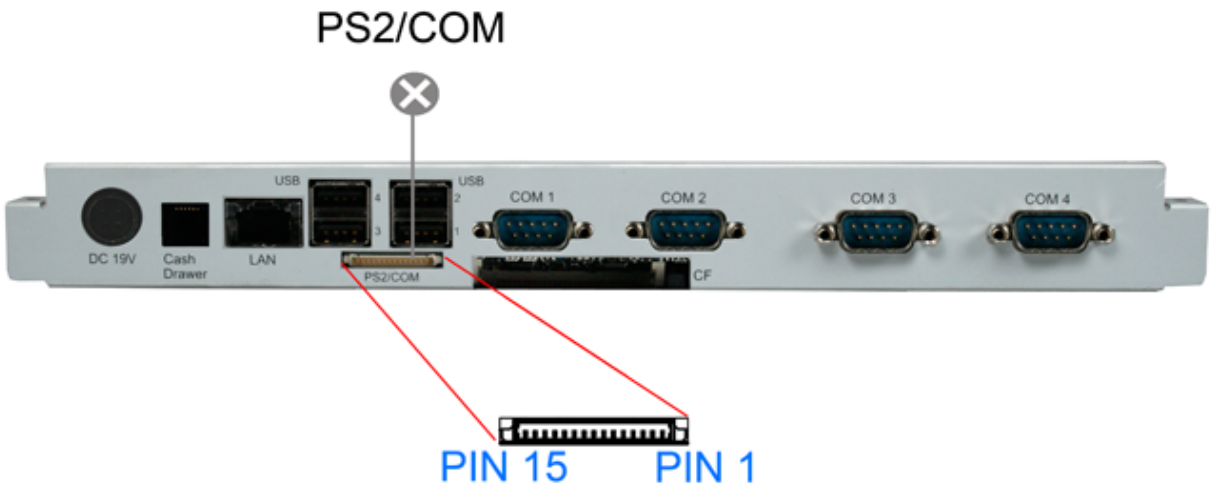
PIN	Description	PIN	Description
1	+19V	3	GROUND
2	+19V	4	GROUND

7.2. Serial Port



COM Port 1/2/3/4			
PIN	Description	PIN	Description
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI / 5V /12V
5	GND	10	NC

7.3. PS2/COM



PS2/COM					
PIN	Description	PIN	Description	PIN	Description
1	GND	6	PC_CLK)KEYBOARD)	11	CTS
2	+5V	7	KB_DAT	12	RTS
3	RXD	8	KB_CLK	13	DSR
4	TXD	9	RI / 5V /12V	14	DCD
5	PC_DAT (KEYBOARD)	10	DTR	15	KB_EN

7.4. Cash Drawer

Connector

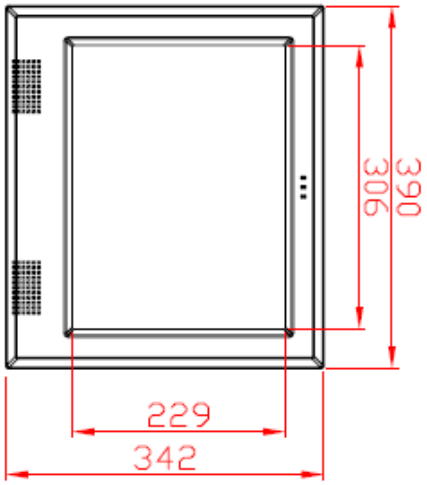
PIN	Description	PIN	Description
1	GND	4	12V
-+2	D_OUT	5	NC
3	D_IN	6	GND

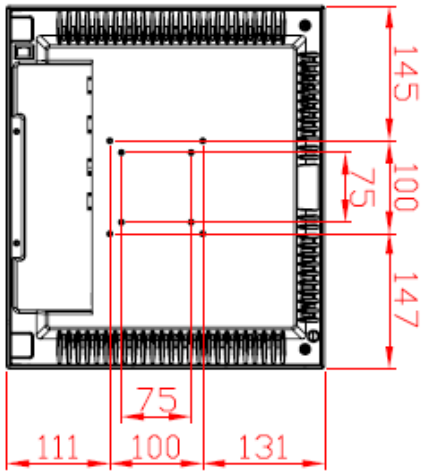
Cash Drawer Control

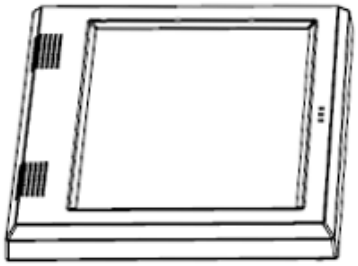
Status	Address	Value
Open	280H	Bit 4 = 0
Close	280H	Bit 4 = 1
Read Status	281H	Bit 0 = 0/1

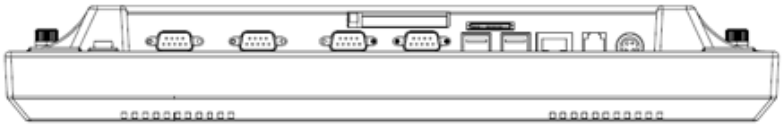
8.

Specification









TOLERANCES	
.X ± 0.2	X° ± 0.25
.XX ± 0.1	.X° ± 0.15
.XXX ± 0.05	.XX° ± 0.05

Main Board	
CPU	Intel® Ultra Low Voltage Celeron M 1GHZ w/o L2 cache Intel® Ultra Low Voltage Celeron M 1.5GHz CPU HZ w/ 1M L2 cache
Chipset	Intel® 852GM + ICH4
System Memory	SO-DIMM DDR 200/266, 128MB up to 1GB
Thermal Solution	Fan-less
OS	Microsoft Windows XP Professional, XPE, WEPOS, Windows CE, Linux
Storage Device	
HDD	1 x 2.5” IDE HDD
Compact Flash	1 x Slot, Type II
I/O Ports	
Serial	5x RS-232, 1x RS-232/422/485(COM1), 4 x RS-232
USB	4 x USB 2.0
LAN	1 x RJ45, Gigabit Ethernet
PS2/COM	1 x internal for MSR, iButton
Cash Drawer	1 x RJ11 (12V)
Audio	1 x Audio Out, Integrated with AC 97 CODEC
Expansion	1 x Mini PCI
Others	
Power Supply	External DC 19V Power Adapter (135W)
UPS Power Backup	Optional 4P1S battery backup
Compliance	FCC / CE
Weight	Approx. 6.5 Kg
Dimension	229(W) x 390(D) x 412(H) mm
Operation Temperature	5^{o} ~ 35^{o}C,
Storage Temperature	-20^{o} ~ 60^{o}C,
Storage Humidity	20 – 85% RH, non-condensing